

Claims

- [c1] A smartcard transaction system configured with a biometric security system, said system comprising:
 - a smartcard configured to communicate with a reader;
 - a reader configured to communicate with said system;
 - a retinal scan sensor configured to detect a proffered retinal scan sample, said retinal scan sensor configured to communicate with said system; and,
 - a device configured to verify said proffered retinal scan sample to facilitate a transaction.
- [c2] The smartcard transaction system of claim 1, wherein said sensor is configured to communicate with said system via at least one of a smartcard, a reader, and a network.
- [c3] The smartcard transaction system of claim 1, wherein said retinal scan sensor is configured to facilitate a finite number of scans.
- [c4] The smartcard transaction system of claim 1, wherein said retinal scan sensor is configured to log at least one of a detected retinal scan sample, processed retinal scan sample and stored retinal scan sample.

- [c5] The smartcard transaction system of claim 1, further including a database configured to store at least one data packet, wherein said data packet includes at least one of proffered and registered retinal scan samples, proffered and registered user information, terrorist information, and criminal information.
- [c6] The smartcard transaction system of claim 4, wherein said database is contained in at least one of the smartcard, smartcard reader, sensor, remote server, merchant server and smartcard system.
- [c7] The smartcard transaction system of claim 5, wherein said remote database is configured to be operated by an authorized sample receiver.
- [c8] The smartcard transaction system of claim 1, wherein said retinal scan sensor device is configured with one of a low-intensity light source and an optical coupler.
- [c9] The smartcard transaction system of claim 8, wherein said low-intensity light source is an infrared source.
- [c10] The smartcard transaction system of claim 1, wherein said retinal scan sensor is configured to detect and verify retinal scan characteristics including blood vessel patterns.

- [c11] The smartcard transaction system of claim 1, wherein said retinal scan sensor device is configured to detect and verify pupil dilation, eyeball pressure and body heat.
- [c12] The smartcard transaction system of claim 1, further including a device configured to compare a proffered retinal scan sample with a stored retinal scan sample.
- [c13] The smartcard transaction system of claim 12, wherein said device configured to compare a retinal scan sample is at least one of a third-party security vendor device and local CPU.
- [c14] The smartcard transaction system of claim 12, wherein a stored retinal scan sample comprises a registered retinal scan sample.
- [c15] The smartcard transaction system of claim 14, wherein said registered retinal scan sample is associated with at least one of: personal information, credit card information, debit card information, savings account information, membership information, PayPal account information, Western Union Account information, electronic bill payment information, automatic bill payment information and loyalty point information.
- [c16] The smartcard transaction system of claim 15, wherein

different registered retinal scan samples are associated with a different one of: personal information, credit card information, debit card information, savings account information, membership information, PayPal account information, Western Union Account information, electronic bill payment information, automatic bill payment information and loyalty point information.

- [c17] The smartcard transaction system of claim 15, wherein a retinal scan sample is primarily associated with first user information, wherein said first information comprises at least one of personal information, credit card information, debit card information, savings account information, membership information, PayPal account information, Western Union Account information, electronic bill payment information, automatic bill payment information and loyalty point information, and wherein a retinal scan sample is secondarily associated with second user information, wherein said second information comprises at least one of personal information, credit card information, debit card information, savings account information, membership information, PayPal account information, Western Union Account information, electronic bill payment information, automatic bill payment information and loyalty point information, and wherein said second user information is different than said first user

information.

- [c18] The smartcard transaction system of claim 1, wherein said smartcard transaction system is configured to begin authentication upon verification of said proffered retinal scan sample.
- [c19] The smartcard transaction system of claim 1, wherein said smartcard is configured to deactivate upon rejection of said proffered retinal scan sample.
- [c20] The smartcard transaction system of claim 1, wherein said sensor is configured to provide a notification upon detection of a sample.
- [c21] The smartcard transaction system of claim 1, wherein said device configured to verify is configured to facilitate at least one of access, activation of a device, a financial transaction, and a non-financial transaction.
- [c22] The smartcard transaction system of claim 1, wherein said device configured to verify is configured to facilitate the use of at least one secondary security procedure.
- [c23] A method for facilitating biometric security in a smart-card transaction system comprising: proffering a retinal scan to a retinal scan sensor communicating with said system to initiate verification of a retinal scan sample for

facilitating authorization of a transaction.

- [c24] The method for of claim 23, further comprising registering at least one retinal scan sample with an authorized sample receiver.
- [c25] The method of claim 24, wherein said step of registering further includes at least one of: contacting said authorized sample receiver, proffering a retinal scan to said authorized sample receiver, processing said retinal scan to obtain a retinal scan sample, associating said retinal scan sample with user information, verifying said retinal scan sample, and storing said retinal scan sample upon verification
- [c26] The method of claim 23, wherein said step of proffering includes proffering a retinal scan to at least one of a low-intensity light source and an optical coupler.
- [c27] The method of claim 23, wherein said step of proffering further includes proffering a retinal scan to a retinal scan sensor communicating with said system to initiate at least one of: storing, comparing, and verifying said retinal scan sample.
- [c28] The method of claim 23, wherein said step of proffering a retinal scan to a retinal scan sensor communicating with said system to initiate verification further includes

processing database information, wherein said database information is contained in at least one of a smartcard, smartcard reader, sensor, remote server, merchant server and smartcard system.

- [c29] The method of claim 23, wherein said step of proffering a retinal scan to a retinal scan sensor communicating with said system to initiate verification further includes comparing a proffered retinal scan sample with a stored retinal scan sample.
- [c30] The method of claim 29, wherein said step of comparing includes comparing a proffered retinal scan sample to a stored retinal scan sample by using at least one of a third-party security vendor device and local CPU.
- [c31] The method of claim 29, wherein said step of comparing includes comparing retinal scan characteristics including blood vessel patterns.
- [c32] The method of claim 23, wherein said step of proffering a retinal scan to a retinal scan sensor communicating with said system further comprises using said retinal scan sensor to detect at least one of pupil dilation, eye-ball pressure and body heat.
- [c33] The method of claim 23, wherein said step of proffering a retinal scan to a retinal scan sensor communicating

with said system to initiate verification further includes at least one of detecting, processing and storing at least one second proffered retinal scan sample.

[c34] The method of claim 23, wherein said step of proffering a retinal scan to a retinal scan sensor communicating with said system to initiate verification further includes the use of at least one secondary security procedure.

[c35] A method for facilitating biometric security in a smart-card transaction system comprising:
detecting a proffered retinal scan at a sensor communicating with said system to obtain a proffered retinal scan sample;
verifying the proffered retinal scan sample; and
authorizing a transaction to proceed upon verification of the proffered retinal scan sample.

[c36] The method of claim 35, wherein said step of detecting further includes detecting a proffered retinal scan at a sensor configured to communicate with said system via at least one of a smartcard, reader, and network.

[c37] The method of claim 35, wherein said step of detecting a proffered retinal scan includes detecting a proffered retinal scan at one of a low-intensity light source and an optical coupler.

- [c38] The method of claim 35, wherein said step of detecting includes at least one of: detecting, storing, and processing a proffered retinal scan sample.
- [c39] The method of claim 35, wherein said step of detecting further includes receiving a finite number of proffered retinal scan samples during a transaction.
- [c40] The method of claim 35, wherein said step of detecting further includes logging each proffered retinal scan sample.
- [c41] The method of claim 35, wherein said step of detecting further includes at least one of detecting, processing and storing at least one second proffered retinal scan sample.
- [c42] The method of claim 35, wherein said step of detecting further includes using said retinal scan sensor to detect at least one of pupil dilation, eyeball pressure and body heat.
- [c43] The method of claim 35, wherein said step of verifying includes comparing a proffered retinal scan sample with a stored retinal scan sample.
- [c44] The method of claim 43, wherein said step of comparing a proffered retinal scan sample with a stored retinal scan

sample comprises storing, processing and comparing blood vessel patterns.

- [c45] The method of claim 43, wherein comparing a proffered retinal scan sample with a stored retinal scan sample includes comparing a proffered retinal scan sample with a biometric sample of at least one of a criminal, a terrorist, and a cardmember.
- [c46] The method of claim 35, wherein said step of verifying includes verifying a proffered retinal scan sample using information contained on at least one of a local database, a remote database, and a third-party controlled database.
- [c47] The method of claim 35, wherein said step of verifying includes verifying a proffered retinal scan sample using one of a local CPU and a third-party security vendor.